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Please replace the paragraph beginning on page 48, line 5, with the following amended paragraph:

B8 Additionally, in one embodiment the data stream identifies sequence header location, GOP structure, coding parameters, PID locations, program map tables and other information suitable for use by controller 2270 in, e.g., selecting appropriate decoding or processing parameters.

IN THE CLAIMS

Please rewrite claim 1 as claim 1 (amended) as follows:

- Sub  
cl  
B8
1. (amended) A program guide for an interactive information distribution system comprising:
- a video layer of said program guide having at least one object; and
  - a graphics layer of said program guide, where the graphics layer selectively provides emphasis and de-emphasis of said at least one object in the video layer.

Please rewrite claim 16 as claim 16 (twice amended) as follows:

- Sub  
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16. (twice amended) A method of interaction for a program guide:
- generating, within service provider equipment of an information distribution system, a bitstream representing said program guide having a video layer and a graphics layer;
  - communicating said bitstream to subscriber equipment;
  - converting, within said subscriber equipment, said bitstream into a display of said program guide; and
  - selectively providing at least one of emphasis and de-emphasis of at least one video layer object using said graphics layer.

REMARKS

This response is intended as a full and complete response to the Final Office Action dated August 28, 2002. In the Office Action, the Examiner noted that claims 1-33

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are pending in the application and that claims 1-33 stand rejected. By this amendment, claims 1 and 16 have been amended, and claims 2-15 and 17-33 continue unamended.

In view of both the amendments presented above and the following discussion, the Applicants submit that none of the claims now pending in the application is anticipated under the provisions of 35 U.S.C. §102 or obvious under the provisions of 35 U.S.C. §103. Thus, the Applicants believe that all of these claims are now in allowable form.

#### Miscellaneous

As to paragraph 1, page 2, DETAILED ACTION, Applicants respectfully direct the Examiner's attention to pages 2 and 8 of Applicants' June 17, 2002 response to the January 16, 2002 Action. In Applicants' June 17, 2002 response, renumbered the claims so that there is a claim 27. Furthermore, the applicants thank the Examiner for interviewing with the applicants' attorney, Steven Hertzberg, on November 20, 2002.

#### **REJECTION OF CLAIMS UNDER 35 U.S.C. §102**

The Examiner has rejected claims 1-5, 8-16 and 20-23 under 35 U.S.C. §102(e) as being anticipated by Schein et al. (U.S. Patent No. 6,268,501, issued July 17, 2001, hereinafter "Schein"). The applicants respectfully traverse the rejection. The applicants' claim 1 recites:

"A program guide for an interactive information distribution system comprising:  
a video layer of said program guide having at least one object; and  
a graphics layer of said program guide, where the graphics layer selectively provides emphasis and de-emphasis of said at least one object in the video layer." (emphasis added)

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 U.S.P.Q. 481, 485 (Fed. Cir. 1984)(citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220

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U.S.P.Q. 193 (Fed. Cir. 1983)) (emphasis added). The Schein reference fails to disclose each and every element of the claimed invention, as arranged in the claim.

The Examiner contends that "the [Schein] guide has a video layer and a graphics layer which provide emphasis and deemphasis of objects in the video layer (for example, elements 528, 526 in FIG. 20B, 530 in FIG. 16B, and 530 in FIG. 17B)." The Examiner also contends that "the video layer has a video region and a graphical region." The applicants respectfully disagree with this characterization. The applicants contend that Schein does not disclose layers at all. Rather, Schein discloses a single image having primarily a graphics region and, optionally, an inset video region. The graphics region and video region do not operate as distinct layers; rather, the graphics and video regions are respective portions of a single layer.

A program guide according to the present invention comprises both a video layer and a graphics layer. The video layer includes various objects which are provided with emphasis and deemphasis via graphics layer manipulation. In particular, "video information representative of each of the objects or elements previously identified (2005-2055) is generated at a central processing location or head end, and transmitted as part of a video stream." (See applicants' specification, page 37, lines 18-21.) Each manipulable object or element is associated with a corresponding graphical overlay element (e.g., an x-y coordinate box or other element). The overlay element (by changing its opacity, color, look, and the like) selectively emphasizes or deemphasizes an object on the screen in response to manipulation of the remote control unit (see applicants' specification, page 37, line 30 to page 38, line 4). Thus, the graphics layer overlays the objects of the video layer, at least where such emphasis and deemphasis is to be provided to such video layer objects.

By contrast, the displayed imagery envisioned by the Schein arrangement is not layered imagery comprising video and graphics layers as discussed in the instant application. Rather, the Schein arrangement utilizes screen regions to display graphics imagery and video imagery. Specifically, there is no instance of video imagery displayed on a layer within the Schein arrangement wherein a graphics layer disposed thereover is used to perform any modifications to video layer imagery. In fact, the term

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"layer" is not present within the Schein patent, thereby further evidencing applicants' contention that Schein does not disclose or suggest the layers of the present invention and, more particularly, the use of the graphics layer to emphasize or deemphasize video layer objects. There is simply no overlaying of video and graphics layers disclosed within Schein. Thus, Schein cannot perform the claimed emphasis/deemphasis function.

As noted in the description of FIG. 3 of Schein beginning in column 8, line 28, an on-screen display controller and formatter (OSDCF) performs various functions including on-screen display controller (OSD) functions. As noted at the top of column 9, "the OSD reads high level graphic commands sent from the processor 100 and stores graphic information in the RAM. The OSD output ... graphic data which is used to generate a local video signal. Depending on the state of the user input interface ... the OSD local video output or the incoming live video will be displayed." That is, graphic information provided by the OSD will be displayed or video information from the incoming live video will be displayed. Thus, Schein teaches selectively displaying one of video and graphics imagery.

The Examiner further contends that the graphics layer and video layers in fact are overlayed as illustratively shown in FIG. 17B, such that the video image may be emphasized or deemphasized based on whether it is in the forefront. The applicants respectfully disagree with this conclusion of the teaching of Schein. Specifically, "Clicking on the remote control device automatically causes a program InfoMenu 530 to pop up on a portion of the television screen 532 (see FIG. 17B). Program InfoMenu 530 may allow the viewer to obtain more information about the currently tuned program, move to contextual linked services, or exit InfoMenu 530 back to the television show." (See Schein, column 22, lines 22-44.) That is, the InfoMenu of FIG. 17B is nothing more than a graphical pop-up window. Nowhere is there any teaching or even suggestion that the graphics layer selectively provides emphasis and deemphasis of at least one object in the video layer. That is, there is no disclosure whatsoever in the Schein reference that the program InfoMenu 530 interacts with any portion of the video layer in which any object within the video layer may be emphasized or deemphasized.

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Thus, the Schein reference fails to disclose each and every element of the claimed invention, as arranged in the claim.

As such, the applicants submit that claim 1 is not anticipated and fully satisfies the requirements of 35 U.S.C. §102 and is patentable thereunder. Likewise, independent claim 16 recites similar limitations as recited in independent claim 1. As such, and for at least the same reasons as discussed above, the applicants submit that independent claim 16 is not anticipated and fully satisfies the requirements of 35 U.S.C. §102 and is patentable thereunder. Furthermore, claims 2-5, 8-15, and 20-33 respectively depend from independent claims 1 and 16 and recite additional limitations thereof. As such, and for at least the same reasons discussed above, the applicants submit that these dependent claims are also not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, the applicants respectfully request that the rejections be withdrawn.

#### **REJECTION OF CLAIMS UNDER 35 U.S.C. §103(a)**

The Examiner rejected claims 6-7 and 17-19 as being obvious under 35 U.S.C. §103 over the Schein patent in view of Blonstein et al. (U.S. Patent No. 6,016,144, issued January 18, 2000, hereinafter "Blonstein"). The applicants respectfully traverse the rejection.

Claims 6 and 7 and 17-19 respectively depend from independent claims 1 and 16, and recite additional limitations thereof. For example, dependent claim 6, when combined with independent claim 1, recites:

"A program guide for an interactive information distribution system comprising:  
a video layer of said program guide having at least one object; and  
a graphics layer of said program guide, where the graphics layer selectively provides emphasis and de-emphasis of said at least one object in the video layer." (emphasis added)

The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy,

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110 U.S.P.Q. 1021, 1024 (Fed. Cir. 1984) (emphasis added). The combination of Schein and Blonstein fails to teach or suggest the applicants' invention as a whole.

As discussed above with regard to 35 U.S.C. §102 rejection, the Schein reference fails to teach or suggest a graphics layer "wherein the graphics layer provides emphasis and deemphasis of at least one object in the video layer." Rather, the Schein reference merely discloses utilizing screen regions to display graphics imagery and video imagery. However, there is no correlation between the graphics imagery and the video imagery, such that the graphics layer provides emphasis and deemphasis of an object or objects in the video layer. That is, there is simply no overlaying of video and graphics layers disclosed in the Schein reference.

Furthermore, the Blonstein reference fails to bridge the substantial gap as between the Schein reference and the applicants' invention. In particular, Blonstein discloses a graphical user interface (GUI) to produce a multilayered graphical presentation. Specifically, the Blonstein arrangement utilizes a graphics processing engine to generate two graphics planes including, in one mode of operation, a transparent layer which exposes graphical buttons produced in a lower graphics layer. However, the Blonstein reference does not teach or suggest a video layer nor does it disclose, teach or suggest a video layer in which video objects are emphasized or deemphasized by a graphics layer. Rather, Blonstein is entirely directed towards graphics processing within the context of a graphical user interface and not to a mixed video and graphics layer processing as claimed by the applicants in claim 6.

As noted by the Examiner, "Schein et al. do not specifically show the masking and revealing an object." The applicants agree with this, since such mask and reveal require a masking layer. However, to the extent that Schein shows any changing of opacity and emphasis of an object, such object comprises a graphics region object and not a video region object, and certainly not a video layer object. Blonstein does show masking and revealing of a lower graphics layer object user a higher graphics layer. However, there is no teaching or suggestion of using a video layer, and certainly no teaching or suggestion of masking and revealing video layer objects by a graphics layer.

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Thus, either singly or in any allowable combination, the Schein and Blonstein arrangements fail to disclose or suggest the emphasis/de-emphasis (or mask/reveal) of a video layer object using a graphics layer. The references are directed to graphics region (Schein) or layer (Blonstein) processing only and do not teach or suggest the claimed invention. Therefore, the applicants submit that claims 6-7 and 17-19, as they now stand, fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

#### CONCLUSION

Thus, the applicants submit that none of the claims, presently in the application, is anticipated under the provisions of 35 U.S.C. §102 or obvious under the provisions of 35 U.S.C. §103. Consequently, the applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Eamon J. Wall, Esq. at (908) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,



Eamon J. Wall, Attorney  
Reg. No. 39,414

Dated: 11/27/02

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**MARKED-UP SPECIFICATION**

**Please replace the paragraph beginning on page 33, line 23, with the following amended paragraph:**

At step 652, to facilitate a transition, the routine freezes the background video and prepares the set top terminal for the next applet or video transmission. In addition, the CPU executes a latency masking process as disclosed in commonly assigned United States patent [application serial number 08/738,361 filed October 25, 1996]5,781,227, issued July 14, 1998. The applet ends at step 654.

**Please replace the paragraph beginnong on page 36, line 17, with the following amended paragraph:**

Specifically, the exemplary interactive program guide screen 2000 comprises a time of day/date [(DOT)](TOD) indicator 2005, a promotional "splash" object 2010, a cable system or provider logo 2015, a video barker 2020 (and associated audio barker), a program time indicator 2025, a channel number indicator [2030]2033, a channel identifier (text or logo) 2035, a pair of channel display decrement objects 2040a and 2040b, a pair of channel display increment objects 2045a and 2045b, a temporal increment object 2048, a temporal decrement object 2047, a program grid 2050 and a scrolling promotional banner 2055. The interactive program guide display 2000 is displayed on a television screen or other video presentation device in, e.g., the home of a subscriber to a cable television or other information distribution system utilizing the interactive electronic program guide.

**Please replace the paragraph beginning on page 42, line 12, with the following amended paragraph:**

Audio source 2110A provides an audio information stream, illustratively an audio information stream associated with the audio visual barker 2020 of the interactive program guide display 2000 of FIG. 20. The audio information stream is coupled to an audio encoder 2120A, where it is encoded into a standard compressed audio format,



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such as Dolby AC3 or another appropriate format. The encoded audio stream A is coupled to each of the transport multiplexer units [2330-1]2130-1 through 2130-N.

**Please replace the paragraph beginning on page 43, line 24, with the following amended paragraph:**

A database 2102 provides program guide information to a plurality of video sources 2110V1 through 2110VN. Each of the plurality of video sources 2110V1 through 2110VN is associated with, illustratively, ten channels (i.e., AMC, Fox, HBO and the like). Each of the ten channels provides different programming material at different times of the day as denoted by programming grid 2050 in the interactive electronic program guide display 2000 of FIG. 20. Specifically, since the displayed portion of the programming grid 2050 comprises a 1.5 hour time interval, it is necessary to associate 16 ([25]24 divided by 1.5) video streams with each ten channel block for each 24 hour period. That is, a first of the 16 video streams associated with the ten channel block is used to identify programming material from 12:00 AM through 1:30 AM, a second stream is used to identify programming material from 1:30 AM through 3:00 AM and so on. Thus, video source 1 (2110V1) provides 16 video information stream to video encoder 1 (2120V1), wherein each of the 16 video information streams includes program identification information for channels 1-10 for each of the 16 1.5 hour time intervals. That is, each of the 16 video streams is capable of providing the video layer used in electronic program guide display 2000 of FIG. 20 for a respective 1.5 hour time period.

**Please replace the paragraph beginning on page 44, line 15, with the following amended paragraph:**

Included within the program guide display 2000 is, of course, the video barker 2020. Associated with the video barker 2020 is the audio stream A produced by audio source 2110A and encoded by audio encoder 2120A. The 16 video streams produced by video encoder [2320V1]2120V1, the audio stream produced by audio encoder [2320A]2120A, and a reference clock CL produced by a clock source [2305]2105 are

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coupled to a first transport multiplexer 2130-1. Similarly, 16 video information streams representing 24 hours of programming data for channels 11 through 20 are produced by a second video source 2110V2, and coupled to a second video encoder 2120V2. The 16 encoded video streams V2 produced by second video encoder 2120V2 are coupled to a second transport multiplexer 2130-2 along with the audio stream A and clock stream CL. Similarly, the Nth video source 2110VA produces 16 video information streams associated with a 24 hour programming period for the N-9 through Nth channels in the system. The 16 video information streams produced by the Nth video stream 2110VN are coupled to an Nth video encoder 2120VN where they are encoded. The Nth group of 16 encoded video information streams VN is then coupled to an Nth transport multiplexer 2130-N, along with the audio stream A produced by audio encoder 2120A and the clock signal CL produced by clock source 2105.

**Please replace the paragraph beginning on page 45, line 18, with the following amended paragraph:**

It is important to note that, while the transport multiplexing function is depicted as being performed by a plurality of transport multiplexers 2130-1 through 2130-N, the transport multiplexing function may also be performed using a single transport multiplexer. Additionally, while the IF modulation function is depicted as being performed by a plurality of IF modulators 2140-1 through 2140-N, the IF modulation function may also be performed using a single IF modulator. The main constraint placed upon the IF modulation function relates to the available bandwidth within the forward channel FC. That is, since each IF modulated signal IF1 through IF-N is capable of carrying data at a maximum bitrate (e.g., 27Mbps in a 64 QAM modulation scheme), the total data rate of the transport stream(s) within the IF modulated signal cannot exceed the available bandwidth. Thus, in the case where very high data rate streams are transport encoded, it may be necessary to use several IF modulators to produce a corresponding several IF modulated signals for transmission via the forward channel FC.

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**Please replace the paragraph beginning on page 46, line 4, with the following amended paragraph:**

A control and applet source [2310D]2110D provides control information and applet data information (i.e., subscriber side programs provided by the server) to a packetizer [2320D]2120D, illustratively an MPEG2 packetizer producing an auxiliary data stream DATA. The auxiliary data stream DATA is coupled to RF modulator [2350]2150 and, optionally, each of the transport multiplexers [2330-1 through 2330-N]2130-1 through 2130-N. In the case of the auxiliary data stream DATA being coupled to each of the transport multiplexers, the resulting multiplexed transport streams T1 through TN will each include the control and applet data such that retrieval of any one of the multiplexed transport streams from the forward channel by a set top terminal will yield control data and applet data sufficient to run any appropriate subscriber side programs.

**Please replace the paragraph beginning on page 48, line 5, with the following amended paragraph:**

Additionally, in one embodiment the data stream identifies sequence header location, GOP structure, coding parameters, PID locations, program map tables and other information suitable for use by controller [2170]2270 in, e.g., selecting appropriate decoding or processing parameters.

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**MARKED UP CLAIMS****Please rewrite claim 1 as claim 1 (amended) as follows:**

1. (amended) A program guide for an interactive information distribution system comprising:
  - a video layer of said program guide having at least one object; and
  - a graphics layer of said program guide, where the graphics layer selectively provides emphasis and de-emphasis of [an]said at least one object[ or objects] in the video layer.

**Please rewrite claim 16 as claim 16 (twice amended) as follows:**

16. (twice amended) A method of interaction for a program guide:
  - generating, within service provider equipment of an information distribution system, a bitstream representing [a]said program guide having a video layer and a graphics layer;
  - communicating said bitstream to subscriber equipment;
  - converting, within said subscriber equipment, said bitstream into a display of said program guide; and
  - selectively providing at least one of emphasis and de-emphasis of at least one video layer object using said graphics layer.